

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. In the amended claims, additions are shown as underlined and deletions are shown as ~~struckthrough~~.

1. (Currently Amended) An extrusion coated substrate selected from paper, cardboard, or aluminum foil, having a coating comprising a multimodal polyethylene produced by polymerization catalysed by a single site catalyst having an MFR₂ of 5 to 25 g/10min and comprising as comonomers to ethylene at least two different C₄₋₁₂ alpha olefins and an LDPE wherein LDPE forms 15 to 35 wt.% of the coating.
2. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises as comonomers to ethylene at least two alpha olefins selected from but-1-ene, hex-1-ene, 4-methyl-pent-1-ene, hept-1-ene, oct-1-ene, and dec-1-ene.
3. (Previously Presented) An extrusion coated substrate as claimed in claim 2 wherein said polyethylene comprises an ethylene butene copolymer and an ethylene hexene copolymer.
4. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal terpolymer comprising
 - a) a lower molecular weight copolymer of ethylene and but-1-ene
 - b) a higher molecular weight copolymer of ethylene and a C₅ to C₁₂ alpha-olefin.
5. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal polymer comprising
 - a) a lower molecular weight polymer which is a binary copolymer of ethylene and a C₄ to C₁₂ alpha-olefin and
 - b) a higher molecular weight polymer which is either a binary copolymer of ethylene and but-1-ene, if the lower molecular weight polymer of a) is a binary copolymer

of ethylene and a C₅ to C₁₂ alpha-olefin, or a terpolymer of ethylene, but- 1-ene and a C₅ to C₁₂ alpha-olefin.

6. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene has an MWD 3 to 6, an MFR₂ of 5 to 20 g/10min and a density of 905 to 930 kg/m³.
7. (Previously presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene has a heat sealing force which varies by less than 2N/25.4 mm over a temperature range of at least 30 °C.
8. (Canceled)
9. (Canceled)
10. (Previously Presented) An extrusion coated substrate as claimed in claim 1 comprising multiple coating layers.
11. (Canceled)
12. (Canceled)
13. (Currently Amended) A process for extrusion coating a substrate comprising extruding a multimodal polyethylene produced by polymerization catalysed by a single site catalyst having an MFR₂ of 5 to 25 g/10 min and which comprises as comonomers to ethylene at least two different C₄₋₁₂ alpha olefins and an LDPE wherein LDPE forms 15 to 35 wt.%, to form a polymer melt and coating a substrate selected from paper, cardboard, or aluminum foil having a coating with said melt.
14. (Previously Presented) A process as claimed in claim 13 wherein said polyethylene is produced in a two-stage process comprising a loop reactor followed by a gas phase reactor.
15. (Canceled)